Ham-Space Digest   Tue, 13 Sep 94   Volume 94 : Issue   253

Today's Topics:
                      FTP Site for KEPS??? Help!
                             MIR Info
                   MIR INFO REQUESTED (3 msgs)
                        SAREX Info Sheet
                     STS-64 Checkpoint #3
               STS-64 Orbital State Vector Rev #46
                  STS-64 SAREX Mission Begins
                             WISP
                            WX Sats

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Thanks for taking the time to read this note.

Due to erratic newsfeeds etc, I am looking for an anonymous FTP site that
carries uptodate KEPS for the Amateur interest satellites, STS missions,
MIR, Hubbble etc. I would prefer one in the USA, but any site will do.

Please include the /pub/ham/... info if possible, it will save me a lot of
logon time (and cost!).

Please e-mail me, or as a last resort post the replies to this newsgroup.

Muchly thanks in advance.

Cheerio,

Brian ZR5DTS   Voice: ++27-31-7011201 (06:00-14:30 UTC)
Internet: briane@goofy.iaccess.za   Fax: ++27-31-7090813 or 7018315
AX25 Packet: ZR5DTS@ZS5S.NTL.ZAF   ICBM's: 29:51:05 S 30:53:59 E
     ****
I am glad I don't know everything, that way life isn't boring - Brian Ellse 94
......I wonder where STS-64 is now??? Damn outta date KEPS!!!!..............
     ****

Date: 12 Sep 1994 11:28:29 -0400
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!swiss.ans.net!nntp.sunbelt.net!
udel!news-4.nss.udel.edu!strauss.udel.edu!not-for-mail@network.ucsd.edu
Subject: MIR Info
To: ham-space@ucsd.edu

Mir is simplex on 145.55. The problem with a verticle is there is little
or no signal radiated up. That's what makes a good verticle, a pattern to
the horizon. So here's the catch 22. Your signal is best on the horizon
when MIR is farthest away, and worse when MIR is closest (when straight
overhead). You need to know when MIR comes over the horizon, and try
then. I run Traksat with the Keps updated every time I see new ones.
The MIR orbit changes. I note the time it comes up and sit and wait.
When I hear their signal, I am ready for either packet or voice. When it
gets close to being overhead, I loose them. When they pass, I pick them
up again.
     I have to mention this because I see alot of people doing it.
When you see MIR on your screen and they're connected to someone else, DO
NOT try to connect. They can only do one connect at a time, and you'll
only be adding to the QRM. If you interfear with the connected station,
it will take longer for them to do their thing and dissconnect. Most of
the time this means you'll have to wait for them to "time out" with MIR.
By then they'll be gone. Wait untill you see the disconnect message, then
try. We would all get much better results using this method.
        Terry

--
Terry Lisansky (lisansky@strauss.udel.edu)
Give me a fast ship........
     For I intend to go in harms way.

In article <2d.1778.599.0N8510A9@exchange.com>, bob.stanton@exchange.com (Bob
Stanton) writes:
>From: bob.stanton@exchange.exchange.com
>To : all
>Subj: MIR INFO REQUESTED
>
>Hello everyone,
>
>   I have been trying to contact the packet radio station on board
>   the MIR space station. Can someone tell me if and what I am doing
>   wrong? Lets start with my hardware:
>
>   Transmitter is a AZDEN PCS-6000H putting out 45 watts.
>   Antenna is a 2M vertical 8' above my 2nd story roof.
>   SWR is 1.4:1
>   My house is about 20' above sea level with some tall trees in
>   the front and back yards.
>   The TNC is a KPC3.
>
>   I am transmitting on 144.49 and receiving on 145.55. I am
>   listening for and attempting to connect to R8MIR-1.
>
>   I am running a Tandy 2500 SX/25 with PAKET 6.0 running.
>
>Does anyone have any ideas?
>
>Thnx & 73
>
>de Bob KD4ARD
>
>
> * QMPro 1.0 94-6871 * Eagles may fly but weasels aren't sucked into jets
Mir does not run duplex like STS missions do.
Set your X-crv to Xmit AND Rcv on 145.55. At least this was the way they
were set up last time I tried them, and I have connected once.
If they are runing duplex now, sorry for the wrong info.
73
Brad

Date: 10 Sep 1994 23:48:17 GMT
From: ihnp4.ucsd.edu!ucsnews!sol.ctr.columbia.edu!newsxfer.itd.umich.edu!
zip.eecs.umich.edu!umn.edu!newsdist.tc.umn.edu!urvile.msus.edu!
TIGGER.STCLOUD.MSUS.EDU!JOHANB01@network.ucsd.edu
Subject: MIR INFO REQUESTED
To: ham-space@ucsd.edu

In article <34tg79$rcc@urvile.MSUS.EDU>, johanb01@TIGGER.STCLOUD.MSUS.EDU writes:
>In article <2d.1778.599.0N8510A9@exchange.com>, bob.stanton@exchange.com (Bob
Stanton) writes:
>>From: bob.stanton@exchange.exchange.com
>>To : all
>>Subj: MIR INFO REQUESTED
>>
>>Hello everyone,
>>
>>   I have been trying to contact the packet radio station on board
>>   the MIR space station. Can someone tell me if and what I am doing
>>   wrong? Lets start with my hardware:
>>
>>   Transmitter is a AZDEN PCS-6000H putting out 45 watts.
>>   Antenna is a 2M vertical 8' above my 2nd story roof.
>>   SWR is 1.4:1
>>   My house is about 20' above sea level with some tall trees in
>>   the front and back yards.
>>   The TNC is a KPC3.
>>
>>   I am transmitting on 144.49 and receiving on 145.55. I am
>>   listening for and attempting to connect to R8MIR-1.
>>
>>   I am running a Tandy 2500 SX/25 with PAKET 6.0 running.
>>
>>Does anyone have any ideas?
>>
>>Thnx & 73
>>
>>de Bob KD4ARD
>>
>>
>> * QMPro 1.0 94-6871 * Eagles may fly but weasels aren't sucked into jets

>Mir does not run duplex like STS missions do.
>Set your X-crv to Xmit AND Rcv on 145.55. At least this was the way they
>were set up last time I tried them, and I have connected once.
>If they are runing duplex now, sorry for the wrong info.
>73

>Brad
>
Sorry the sig line didn't come out on the first reply, here goes again.

Date: Sat, 10 Sep 94 00:56:00 -0500
From: agate!howland.reston.ans.net!europa.eng.gtefsd.com!emory!metro.atlanta.com!
mhv.net!news.sprintlink.net!news.infi.net!grouper.exchange.com!exchange!
bob.stanton@ames.arpa
Subject: MIR INFO REQUESTED
To: ham-space@ucsd.edu

From: bob.stanton@exchange.exchange.com
To : all
Subj: MIR INFO REQUESTED

Hello everyone,

        I have been trying to contact the packet radio station on board
        the MIR space station. Can someone tell me if and what I am doing
        wrong? Lets start with my hardware:

        Transmitter is a AZDEN PCS-6000H putting out 45 watts.
        Antenna is a 2M vertical 8' above my 2nd story roof.
        SWR is 1.4:1
        My house is about 20' above sea level with some tall trees in
        the front and back yards.
        The TNC is a KPC3.

        I am transmitting on 144.49 and receiving on 145.55. I am
        listening for and attempting to connect to R8MIR-1.

        I am running a Tandy 2500 SX/25 with PAKET 6.0 running.

Does anyone have any ideas?

Thnx & 73

de Bob KD4ARD

SB SAREX @ AMSAT $STS-64.002
SAREX Info Sheet

            STS-64 Shuttle Amateur Radio Experiment (SAREX)
                          Information Sheet

Mission: STS-64 Space Shuttle Discovery
         Lidar In-Space Technology Experiment (LITE-1)
         SPARTAN-201
         Robot Operated Materials Processing System (ROMPS)

Launch: September 9, 1994, 22:22 UTC

Orbit: 57 degree inclination

Mission Length: 9 days (Nominal)

Amateur
Radio
Operators: Dick Richards, KB5SIW, Commander, Blaine Hammond, KC5HBS,
         Pilot, and Jerry Linenger, KC5HBR, Mission Specialist

Modes: FM Voice
         Prime callsign: KB5SIW

         Packet Radio
         Callsign: W5RRR-1

Frequencies: All operations in split mode. Do not transmit on
         the downlink frequency.

Voice Freqs: Downlink: 145.55 MHz (Worldwide)
         Uplinks: 144.91, 144.93, 144.95, 144.97, 144.99 MHz
                  (Except Europe)
                  144.70, 144.75, 144.80 MHz (Europe only)

```
        Note:  the crew will not favor any specific uplink
        frequency, so your ability to work the crew will

        be the "luck of the draw"

Packet Freqs: Downlink:145.55 MHz
        Uplink:      144.49 MHz

Info: Goddard Amateur Radio Club, WA3NAN, Greenbelt Maryland,
        SAREX Bulletins and Shuttle Retransmissions
        3860 KHz, 7185 KHz, 14,295 KHz, 21,395 KHz, 28,650 KHz
        and 147.45  MHz (FM)

        ARRL Amateur Radio Station, W1AW, Newington, CT
        SAREX News Bulletins
        3990, 7290, 14,290, 18,160, 21,390, and 28,590 KHz
        and 147.555 MHz (FM)

        Also, bulletins available on internet, via AMSAT ANS,

        Compuserve, and your local PBSS.

School Group Participation:     10 school groups will participate

                in SAREX with pre-scheduled direct
                and telebridge contacts.  These include
                nine in the U.S., and one in New Zealand.



QSLs: ARRL Headquarters
         SAREX QSL (please indicate flight #, STS-XX)
         225 Main Street
         Newington, CT 06111
         This address must be used for all future missions.

In order for the managing process to run smoothly, please include
the following information in your QSL or report: Shuttle flight
nur (STS-XX), date, time in UTC, frequency and mode (FM voice,
packet, sstv or fv).  This documents the contact or listener
report.  In addition, you must also include an SASE using a large,
business-sized envelope you wish to receive a card.  No cards
are distributed without the proper post affixed or sufficient
IRCs included.

The following clubs have graciously volunteered their service for
handling QSL cards for the following missions:
```

```
STS-58    Connecticut DX Association
STS-60    Cowley County Amateur Radio Club, Kansas
STS-59    Orange Park Amateur Radio Club, Florida
STS-64    Nashua Area Radio Club, New Hampshire
```

Information provided by Frank H. Bauer, KA3HDO and Robert Inderbitzen, NQ1R
for the SAREX Working Group

/EX

Date: 11 Sep 1994 22:20:04 -0400
From: ihnp4.ucsd.edu!ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!
swiss.ans.net!newstf01.cr1.aol.com!search01.news.aol.com!not-for-
mail@network.ucsd.edu
Subject: STS-64 Checkpoint #3
To: ham-space@ucsd.edu

MacSPOC Users-

The enclosed checkpoint reflects tracking following a 2 fps posigrade Trim
Burn #4 executed at 1/17:02:43 MET. Allowing for the trim burn's effects,
this checkpoint removes 9.1 miles of downtrack error accumulated since the
last update. The next Trim Burn #5 opportunity at 3/16:51 MET is
currently being evaluated.

-Dan Adamo

```
================
STS64-3.cp
================
Orbit 32 Post-Trim-#4 at 1/22:23 MET
1994 252 ( 9- 9) 22 22 54.947
1994 255 ( 9-12)  1  0   .000
  0.244960754235D+07  0.101460755499D+00
3    34
 -0.187222543734D+08 -0.517970160057D+07 -0.985672721201D+07
 -0.465036743151D+04 -0.173911884863D+05  0.179518363115D+05
    1800.2  229431.0     79.00       2.72
```

Date: Mon, 12 Sep 1994 23:31:54 GMT
From: netcomsv!netcom.com!astroman@decwrl.dec.com
Subject: STS-64 Orbital State Vector Rev #46
To: ham-space@ucsd.edu

```
Vector format = 7
Satellite Name:          STS-64
Catalog Number:          23251  94059A
Epoch Date/Time:         94255.75008328704
                         09/12/1994  18:00:07.196 UTC
ECI X:                        3055.261376 km
    Y:                       -2273.440411 km
    Z:                        5436.176000 km
    Xdot:                        5.988102584 km/s
    Ydot:                        4.711679502 km/s
    Zdot:                       -1.393765000 km/s
ndot/2 (drag):            0.00099631029 rev/day^2
nddt/6:                      4.12223E-08 rev/day^3
Bstar:                       1.38809E-04 1/Earth Radii
Elset #:                                8
Rev @ Epoch:             46.28439684860
```

MSDOS/PC software is available for conversion of
OSV to 2 Line Keplerian Elements via ftp to:
oak.oakland.edu:/pub/msdos/hamradio/v2l9331.zip
and the SIMTEL archives.

State Vectors courtesy Ken Ernandes N2WWD

SM

Date: Fri, 9 Sep 1994 19:43:43 MDT
From: agate!library.ucla.edu!news.mic.ucla.edu!unixg.ubc.ca!
quartz.ucs.ualberta.ca!alberta!ve6mgs!usenet@ames.arpa
Subject: STS-64 SAREX Mission Begins
To: ham-space@ucsd.edu

SB SAREX @ AMSAT $STS-64.001
STS-64 SAREX Liftoff

Silver Spring, MD, September 9 1994 at 21:00 EDT

The Space Shuttle Discovery roared into the skies of the Kennedy Space
Center today initiating the fourth Shuttle Amateur Radio Experient
(SAREX) flight this year. The STS-64 mission, delayed by looming
showers and clouds, was launched 1 hour 53 minutes later than
originally planned. Liftoff of Discovery occurred at 22:22:55 UTC.
The six member crew of STS-64 will spend 9 days on-orbit performing
and supporting several flight experiments. These include atmospheric
studies which will be performed using the LIDAR In-Space Technology
Experiment (LITE), deploying and retrieving the Spartan-201-II

astronomy satellite, and supporting the Robot Operated Materials
Processing System (ROMPS) experiment.

Three of the crew members are ham radio operators. They are Shuttle
Commander Dick Richards, KB5SIW, Pilot Blaine Hammond, KC5HBS, and
Mission Specialist and Jerry Linenger, KC5HBR. The three will operate
the SAREX in both voice and packet modes. SAREX is a secondary mid-
deck payload that allows ham radio operators and school students the
opportunity to talk to the astronauts while they are in orbit. Ten
scheduled school group contacts with students in the US and New
Zealand are planned. The SAREX Working Group expects the SAREX
payload to be configured and operational approximately 22 hours into
the flight or at approximately 20:22 UTC on September 10. Please note
that Shuttle power conservation measures, required to support an extra
(10th) day of flight, is expected to result in the packet radio system
being turned on later than what usually occurs in a typical SAREX
mission. Listen on the downlink frequency (145.55 MHz) for the packet
system BEFORE sending packet connects to the Space Shuttle.

The following Keplerian element set, JSC-012, which was developed by
Gil Carman, WA5NOM, is the official SAREX element set for today.

STS-64
1 23251U 94059A   94253.17923136 .00083204 00000-0 14200-3 0   128
2 23251 57.0058 223.4928 0009244 269.5211 90.4820 16.05202670   52

Satellite: STS-64
Catalog number: 23251
Epoch time: 94253.17923136   =   (10 SEP 94   04:18:05.59 UTC)
Element set: 012
Inclination: 57.0058 deg
RA of node: 223.4928 deg   Space Shuttle Flight STS-64
Eccentricity: .0009244   Keplerian element set JSC-012
Arg of perigee: 269.5211 deg   Launch: 09 SEP 22:22:55 UTC
Mean anomaly: 90.4820 deg
Mean motion: 16.05202670 rev/day   Gil Carman
Decay rate: 8.3204e-04 rev/day^2   NASA Johnson Space Center
Epoch rev: 5
Checksum: 263

These elements will propagate to match the nominal planned trajectory
with respect to Mission elapsed time, and have been adjusted to
reflect the actual launch time of 22:22:55.

Submitted by Frank H. Bauer, KA3HDO for the SAREX Working Group
/EX

Date: Fri, 09 Sep 1994 10:59:36 -0600
From: agate!howland.reston.ans.net!cs.utexas.edu!oakhill!val!afarm!
fredmail@ames.arpa
Subject: WISP
To: ham-space@ucsd.edu

WiSP is a Windows satellite pacsat tracking and data upload/download engine,
among other things. It is available on DRIG in Dallas.

Ron W5RKN

Date: Mon, 12 Sep 1994 13:12:33 GMT
From: waikato!comp.vuw.ac.nz!actrix.gen.nz!mklee@ames.arpa
Subject: WX Sats
To: ham-space@ucsd.edu

In article <94091122585869@scninet.org>,
Eddie Manalo <eddie.manalo@scninet.org> wrote:
> Can anyone please direct me where I can get informations about receiving
> weather satellites?

Have you tried the book "Weather Satellite Handbook" by Dr Ralph E
Taggart (WB8DQT), 4th edition, published by ARRL. Costs USD20, I believe.

I found it very good for general understanding of what could be obtained
and what to expect.

Regards
mklee@actrix.gen.nz
Mun-Kong Lee
Raumati Beach
New Zealand

End of Ham-Space Digest V94 #253
****